

1. (Amended) A photovoltaic device comprising:  
a plurality of quantum wells and  
a plurality of barriers, said barriers alternating with said quantum wells, one of  
said plurality of quantum wells and said plurality of barriers comprised of tensile strained  
layers and the other of said plurality of quantum wells and said plurality of barriers  
comprised of compressively strained layers, said tensile strained layers and said  
compressively strained layers having compositions such that a period of one tensile  
strained layer and one compressively strained layer exerts substantially no shear force on  
a neighbouring structure.

2. (Amended) A photovoltaic device as claimed in claim 1, wherein said  
neighbouring structure is one of:  
a further period of one tensile strained layer and one compressively strained layer;  
a layer of arbitrary doping having a lattice constant; and  
a substrate having a lattice constant, wherein said arbitrary doping layer lattice  
constant is substantially the same as said substrate lattice constant.

4. (Amended) A photovoltaic device as claimed in claim 3, wherein at least one of  
said tensile strained layers or said compressively strained layers is a quantum well having  
a lattice constant not equal to said substrate lattice constant and having a Group III/V

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B1  
semiconductor composition with a bandgap lower than if said quantum well had a lattice constant equal to said substrate lattice constant.

5. (Amended) A photovoltaic device as claimed in claim 3, wherein at least one of said tensile strained layers or said compressively strained layers is a barrier having a lattice constant not equal to said substrate lattice constant and a Group III/V semiconductor composition with a bandgap higher than if said barrier had a lattice constant equal to said substrate lattice constant.

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#3  
21. (Amended) A photovoltaic device as claimed in claim 18, wherein at least one of said tensile strained layers or said compressively strained layers is a quantum well having a lattice constant not equal to said substrate lattice constant and a Group III/V semiconductor composition with a bandgap lower than if said quantum well had a lattice constant equal to said substrate lattice constant.

22. (Amended) A photovoltaic device as claimed in claim 18, wherein at least one of said tensile strained layers or said compressively strained layers is a barrier having a lattice constant not equal to said substrate lattice constant and a Group III/V semiconductor composition with a bandgap higher than if said barrier had a lattice constant equal to said substrate lattice constant.

35. (*Amended*) A photovoltaic device as claimed in claim 34, wherein said neighbouring structure is one of:

A4  
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a further period of one tensile strained layer and one compressively strained layer;

a layer of arbitrary doping having a lattice constant; and

a substrate having a lattice constant, wherein said arbitrary doping layer lattice constant is substantially the same as said substrate lattice constant.

--42. (*New*) A photovoltaic device as claimed in claim 1, wherein said quantum wells comprise said compressively strained layers.

43. (*New*) A photovoltaic device as claimed in claim 1, wherein said barriers comprises said tensile strained layers. --